

# SUFFICIENT ACCURACY

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# REGULATION

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- Per 42 CFR § 83.13 (c)(1)(i), *Radiation doses can be reconstructed with sufficient accuracy if NIOSH has established that it has access to sufficient information to estimate the maximum radiation dose, for every type of cancer for which radiation doses are reconstructed, that could have been incurred in plausible circumstances by any member of the class or if NIOSH has established that it has access to sufficient information to estimate the radiation doses of members of the class more precisely than an estimate of the maximum radiation dose.*



# PRELIMINARY STEPS

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- ◆ REVIEW WORK PROCESS – SOURCES, POTENTIAL TYPES OF EXPOSURES
- ◆ IDENTIFY EXPOSED POPULATIONS – WHO WAS EXPOSED, VARIABILITY
- ◆ APPLY HIERARCHICAL REVIEW TO EXPOSED POPULATION(S)

# PERSONAL MONITORING DATA

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- ◆ DEMONSTRATE THAT HIGHEST EXPOSED WORKERS WERE COVERED
- ◆ EVERYONE MONITORED OR MONITORED GROUP INCLUDED HIGHEST EXPOSED
- ◆ MONITORING METHOD MUST BE SOUND
- ◆ COWORKER MODELS MUST BE INCLUSIVE AND ACCOUNT FOR STRATIFICATION

# OTHER DATA

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- ◆ AIR MONITORING, SOURCE TERM, AND SURROGATE DATA ARE MORE PROBLEMATIC
- ◆ NEED TO SHOW THAT MONITORING OR MODEL ACCOUNTS FOR THE HIGHEST EXPOSED BUT IS PLAUSIBLE (E.G., NOT UNREALISTICALLY HIGH)

# CONSIDERATION OF EXPOSURE POTENTIAL

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- ◆ HOW MUCH ACCURACY IS SUFFICIENT?
- ◆ FOR LOW EXPOSURE POTENTIAL – IS LESS ACCURACY SUFFICIENT?
- ◆ EXAMPLE – RESIDUAL PERIOD.
- ◆ PROBLEM WITH EVALUATING COWORKER MODELS FOR STRATIFICATION